

**MEMORANDUM OF UNDERSTANDING
CONCERNING SCIENTIFIC AND TECHNICAL COOPERATION
IN THE EARTH SCIENCES AS RELATED TO GREENLAND**

BETWEEN

**THE U.S. GEOLOGICAL SURVEY OF
THE DEPARTMENT OF THE INTERIOR OF
THE UNITED STATES OF AMERICA**

AND

**THE GEOLOGICAL SURVEY OF DENMARK AND GREENLAND OF
THE MINISTRY OF THE ENVIRONMENT
OF DENMARK**

AND

**THE BUREAU OF MINERALS AND PETROLEUM OF THE
HOME RULE GOVERNMENT OF GREENLAND**

Preamble

WHEREAS the Government of the United States of America and the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland, have made a Joint Declaration on Economic and Technical Cooperation and Cooperation on the Environment in Greenland including programs in the field of science, and

WHEREAS the U.S. Geological Survey and the Geological Survey of Denmark and Greenland have had past cooperation on common scientific matters, and desire to formalize and extend this cooperation to include the Bureau of Minerals and Petroleum of the Home Rule Government of Greenland,

NOW, THEREFORE, the U.S. Geological Survey of the Department of the Interior of the United States of America (hereinafter "USGS"), on the one hand, and the Geological Survey of Denmark and Greenland of the Ministry of the Environment of Denmark (hereinafter "GEUS") and the Bureau of Minerals and Petroleum of the Home Rule Government of Greenland (hereinafter "BMP"), on the other hand, hereby agree to pursue scientific and technical cooperation in the earth sciences in accordance with this Memorandum of Understanding (hereinafter "Memorandum").

ARTICLE I. SCOPE AND OBJECTIVES

1. The purpose of this Memorandum is to provide a framework for the exchange of scientific and technical knowledge and the augmentation of scientific and technical capabilities between the

USGS, on the one hand, and the GEUS and BMP, on the other hand, with respect to the earth sciences as applied to the investigation of topics of particular relevance to Greenland, and in accordance with the "Joint Declaration on Economic and Technical Cooperation," signed August 6, 2004, the "Joint Declaration on Cooperation on the Environment in Greenland," signed August 6, 2004, (Joint Declarations) and the associated "Fact Sheet", attached as Annex I.

2. The Parties shall encourage and facilitate, where appropriate, the development of direct contacts and cooperation between the Parties and other government agencies, universities, research centers, institutions, and private sector companies and other entities of the United States and Denmark, including the Home Rule Government of Greenland.

3. Either Party may, with the consent of the other Party and to the extent permitted by laws and policies of each Party's government, invite other government entities or agencies of the United States and Denmark, including Greenland, and other entities, including scientists, technical experts, governmental agencies, and institutions of third countries or international organizations, to participate in activities undertaken pursuant to this Memorandum, subject to such terms and conditions as the Parties may specify.

ARTICLE II. COOPERATIVE ACTIVITIES

1. Forms of cooperation under this Memorandum may consist of exchanges of technical information; visits; participation in training courses, conferences and symposia; the exchange of professional geoscientists in areas of mutual interest; and any other cooperative research consistent with programs of the Parties. Specific areas of cooperation may include, but are not limited to, such areas of mutual interest as:

- A. Earth-science investigations, including hazards, resources, and the environment;
- B. Assessment of mineral and on- and off-shore oil and gas resources;
- C. Assessment of activities related to on- and off-shore oil, gas, and mineral resources, and the environmental impact of such activities;
- D. Arctic Ocean and margins geology, seabed morphology, and energy resources;
- E. Water resources and glaciology;
- F. Information systems, including geographic and geospatial analysis and investigations; and
- G. Collaboration on field logistics.

2. Activities under this Memorandum shall be undertaken in accordance with the laws, regulations, and procedures of each country. Activities undertaken within the territory of one of the

countries shall also be undertaken in accordance with the laws, regulations and procedures of that country.

ARTICLE III. AVAILABILITY OF RESOURCES

Cooperative activities under this Memorandum shall be subject to the availability of personnel, resources, and funds. This Memorandum shall not be construed to obligate any particular expenditure or commitment of resources or personnel. In accordance with Article VIII below, the Parties shall agree in writing upon specific Project Annexes before the commencement of any activity pursuant to this Memorandum.

ARTICLE IV. FEE AND TAX EXEMPTION

In accordance with its laws and regulations, each Party shall assist toward obtaining, on behalf of the other Party, relief from taxes, fees, customs duties, and other charges (excluding fees for specific services rendered) levied with respect to:

A. All transfer, ownership, construction, renovation, or maintenance of facilities or property by or on behalf of the other Party to implement this Memorandum.

B. The import, purchase, ownership, use, or disposition (including export) of goods and services by or on behalf of the other Party in support of activities under this Memorandum; and

C. Personal property of personnel of the other Party or entities of that Party implementing provisions of this Memorandum.

ARTICLE V. INTELLECTUAL PROPERTY AND SECURITY OBLIGATIONS

Provisions for the protection and allocation of intellectual property rights created or furnished in the course of cooperative activities under this Memorandum are set forth in Annex II of this Memorandum. Provisions for the protection of classified information and unclassified export-controlled information and equipment are set forth in Annex III of this Memorandum. Annexes II and III constitute integral parts of this Memorandum.

ARTICLE VI. DISCLAIMER

Information transmitted by one Party to the other Party under this Memorandum shall be accurate to the best knowledge and belief of the transmitting Party, but the transmitting Party does not warrant the suitability of the information transmitted for any particular use or application by the receiving Party or by any third Party.

ARTICLE VII. PLANNING AND REVIEW OF ACTIVITIES

Each Party shall designate a Principal Representative to supervise activities under this Memorandum. The Principal Representatives shall, at least annually, consult by any mutually agreeable means to review the progress, problems, and effectiveness of activities under this Memorandum, and to develop proposals for future activities, as appropriate.

ARTICLE VIII. PROJECT ANNEXES

Any activity carried out under this Memorandum shall be agreed upon in advance by the Parties in writing. Whenever activities beyond the exchange of technical information or visits by individuals are contemplated, such activity shall be described in an agreed Project Annex to this Memorandum, which shall set forth, in terms appropriate to the activity and products arising from such activity, a work plan, staffing requirements, cost estimates, funding sources, and other undertakings, obligations, or conditions not included in this Memorandum. In case of any inconsistency between the terms of this Memorandum and the terms of a Project Annex, the terms of this Memorandum shall control.

ARTICLE IX. ENTRY INTO FORCE AND TERMINATION

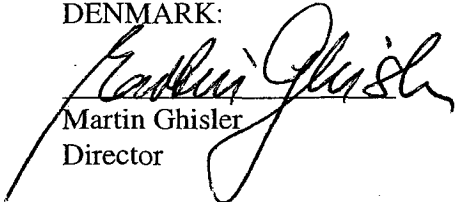
This Memorandum shall enter into force upon the signature of the Parties and remains in force until terminated at any time by any Party upon ninety (90) days prior written notice to the other Party. Unless otherwise agreed, the termination of this Memorandum shall not affect the validity or duration of projects under this Memorandum that are initiated prior to such termination.

DONE at Copenhagen, Denmark, in triplicate, in the English language on the 31st of May 2006.

**FOR THE U.S.
GEOLOGICAL SURVEY
OF THE DEPARTMENT
OF THE INTERIOR OF
THE UNITED STATES OF
AMERICA:**


James Cain
U.S. Ambassador

**FOR THE
GEOLOGICAL SURVEY
OF DENMARK AND
GREENLAND OF THE
MINISTRY OF THE
ENVIRONMENT OF
DENMARK:**


Martin Ghisler
Director

**FOR THE BUREAU OF
MINERALS AND
PETROLEUM OF THE
HOME RULE
GOVERNMENT OF
GREENLAND:**


Kaj Kleist
Executive Deputy Minister

ANNEX I

Joint Declaration

by

The Government of the United States of America

and

**The Government of the Kingdom of Denmark,
including the Home Rule Government of Greenland,**

on

Economic and Technical Cooperation

Meeting in **Igaliku** on **August 6, 2004**, Colin L. Powell, Secretary of State of the United States of America, Per Stig Møller, Foreign Minister of the Kingdom of Denmark and Josef Motzfeldt, Deputy Premier of the Greenland Home Rule Government

declared:

- The Government of the United States of America and the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland ("the partners"), attach importance to the existing traditional ties between the people of the United States of America and of Greenland. These ties are based on the democratic and freedom-loving values we share, our common commitment to international peace and security, as well as the cultural and geographical solidarity of the peoples of the Arctic region;
- The Government of the United States of America and the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland, wish to strengthen good neighbourly relations and friendship, as well as reinforce close and lasting relations,
- To that end the partners have decided to strengthen cooperation between the United States and Greenland.

Paragraph 1

To help realize mutual benefits for our citizens, broad economic and technical cooperation shall be established between the United States of America and Greenland, including cooperation on, inter alia, research, technology and energy cooperation, environmental issues, education, development, tourism, air traffic planning and trade.

Paragraph 2

1. To promote and coordinate the wide spectrum of activities foreseen within this enhanced economic and technical cooperation a Joint Committee shall be established to cooperate on all issues of mutual interest within this broad framework.

2. The Joint Committee will:

-constitute a forum for formal and informal exchange of information and regular coordination and consultation on economic and technical issues of mutual interest,

-coordinate and monitor existing national programs, projects and other activities with a view toward their full implementation,

-identify and consider proposals for and agree, subject to funding approval, new or enhanced joint cooperation projects and programs,

-examine other questions arising within this framework.

3. Joint projects and programs will be implemented through joint contributions. Financial support is envisaged to be one form of contribution but also technical and expert assistance, know how, referral to appropriate loan and investment guarantee institutions, in-kind contributions etc. will be considered as contributions to joint projects, as appropriate. Contributions will be subject to the availability of funds in accordance with national laws and procedures.

Paragraph 3

The Joint Committee, consisting of representatives of the United States Government and representatives from the Danish Government, including the Greenland Home Rule Government, shall meet at least annually. In addition the committee will convene at other times as required in expert configurations according to substance matter. The Chair will alternate between the partners annually.

Paragraph 4

In their endeavours to promote this enhanced economic and technical cooperation the Government of the United States of America and the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland, will use their best efforts to find timely common solutions to any issues that may arise within the framework of this declaration.

Issued this day, August 6, 2004, in Igaliku.

For the Government of the
Kingdom of Denmark, including
the Greenland Home Rule Government

/s/

.....

Per Stig Moller

For the Government of
The United States of America

/s/

.....

Colin L. Powell

/s/

.....

Josef Motzfeldt
For the Home Rule Government
of Greenland

Joint Declaration

By

The Government of the United States of America

And

**The Government of the Kingdom of Denmark,
including the Home Rule Government of Greenland,**

on

Cooperation on the Environment in Greenland

Meeting in **Igaliku** on **August 6, 2004**, Colin L. Powell, Secretary of State of the United States of America, Per Stig Møller, Foreign Minister of the Kingdom of Denmark and Josef Motzfeldt, Deputy Premier of the Greenland Home Rule Government

declared:

1. The Government of the United States of America and the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland ("the partners"), recognize the importance of protecting and improving the environment in Greenland. Acknowledging the vulnerability of the arctic environment, the partners undertake to cooperate with regard to:

- prevention and combating of pollution dangerous to human health,
- prevention and combating of other pollution of air, water, ice, and earth,
- protection of nature, its wild animals, plants, and their habitats,
- protection of the landscape and areas of historical and scientific value.

2. The partners will address environmental issues cooperatively through appropriate channels. The partners further intend to establish an Environmental Subcommittee of the Permanent Committee established pursuant to the 1991 Memorandum of Understanding. This Subcommittee will meet regularly to identify and address environmental issues and recommend relevant countermeasures to risks that may be posed by environmental contamination affecting the Thule Defense Area and the areas adjacent to the Defense Area. The common goals are to protect the environment and to prevent detrimental effects from any activities to the health and safety of residents of Greenland, as well as of the military and civilian personnel associated with the U.S. armed forces in Greenland.

3. The partners recognize that U.S. armed forces in the Thule Defense Area respect Greenland Home Rule environmental standards. This is demonstrated in the Final Governing Standards applying at the Thule Defense Area, which the U.S. Government updates periodically to reflect the more protective of the U.S. or Greenlandic environmental standards. To assist in the process of updating the Final Governing Standards, the partners will exchange information and consult as appropriate regarding these standards.

4. Representatives of the Government of the Kingdom of Denmark, including the Home Rule Government of Greenland, will have access, consistent with the military mission, security and relevant safety considerations, to the Thule Defense Area to acquaint themselves with environmental conditions there. This access will be facilitated through the Thule base commander. With due regard for security classifications and consistent with their respective applicable laws and regulations, the partners will cooperate fully to exchange relevant and available information pertaining to environmental matters.

5. In light of the principles underlying the environmental cooperation established herein, the partners acknowledge that environmental considerations will be a natural element of consultations related to any realignment of the Defense Area.

Issued this day, August 6, 2004, in Igaliku.

For the Government of the Kingdom of Denmark,
Including the Home Rule Government
of Greenland

For the Government of
the United States of America

/s/
.....
Per Stig Moller

/s/
.....
Colin L. Powell

For the Government of Denmark

/s/
.....
Josef Motzfeldt
For the Home Rule Government
of Greenland

Fact Sheet

Enhancing Cooperation between the United States and Greenland

Economic, Technical and Environmental Cooperation

Under the joint declarations on Economic and Technical Cooperation and on Cooperation on the Environment in Greenland the Governments of the United States and Denmark, including the Home Rule Government of Greenland, have agreed to broaden the relationship between the United States and Greenland.

The Declaration on Economic and Technical Cooperation creates a Joint Committee that will work actively and collaboratively to identify and consider proposals and agree, subject to funding approval, new or enhanced joint cooperation projects and programs in the fields of research, technology and energy cooperation, environmental issues, education, development, tourism, air traffic planning and trade. The first meeting of the Joint Committee will take place in the capital of Greenland, Nuuk, autumn 2004.

In the Declaration on Cooperation on the Environment in Greenland the Governments of the United States and Denmark, including the Home Rule Government of Greenland, recognize the importance of protecting the environment in Greenland and will cooperate with regard to the prevention of and combating pollution, as well as protection of nature and the landscape.

The United States reaffirms that the armed forces in the Thule Defense Area respect Greenland Home Rule Government environmental standards, as reflected in the Final Governing Standards applying at the Thule Defense Area, which the U.S. Government updates periodically to reflect the more protective of the U.S. or Greenlandic environmental standards.

An Environmental Subcommittee is established to meet regularly to identify and address environmental issues and recommend relevant countermeasures to risks that may be posed by environmental contamination affecting the Thule Defense Area and the areas adjacent to the Defense Area.

Some illustrative examples of projects that are planned, subject to the availability of funds in accordance with national laws and procedures, include the following inside and outside the formal framework of the declarations:

a) Outside the formal framework of economic/technical and environmental cooperation

The operations and maintenance contract at Thule Air Base is scheduled to be renewed in November 2004. The value is expected to exceed \$500 million. The new contract calls for encouraging the contractor to use the local Greenlandic workforce to the maximum extent possible, and for programs to improve the skills and qualifications of the Greenlandic labor force at the base.

In December 2003, the U.S. Air Force awarded a five-year contract valued at \$17.5 million to Air Greenland to transport cargo and personnel to Thule Air Base.

The United States plans to modernize and improve facilities at Thule Air Base. For example, the Fiscal Year 2005 budget submitted to the U.S. Congress requested \$21 million for construction at the base. Other projects are planned at the base over the next five years. As with the operations and maintenance contract, the contractor will be encouraged to use the local Greenlandic workforce to the maximum extent possible for construction purposes at the base.

b) Within the framework of economic and technical cooperation

1) Programs in the fields of culture and education:

Development and implementation of a virtual consulate.

Opening of an American corner in Nuuk.

Provision of English-language training resources to Nuuk's Teacher Training Institute.

Inclusion of Greenlanders as eligible for relevant U.S. scholarship programs.

2) Programs in the field of science:

Memorandum of Understanding (MOU) between National Science Foundation, Greenland Home Rule Government and Danish Polar Centre concerning cooperation.

MOU between US Geological Survey, Greenland Home Rule Government and Geological Survey of Denmark and Greenland (GEUS) concerning cooperation.

Provision of field logistics to scientific projects in Greenland.

3) The Joint Committee on Economic and Technical cooperation initially will explore the possibilities for short and long term cooperation on:

Telemedicine (e.g. capacity building, and provision of equipment and technical assistance).

Arctic technology (e.g. capacity building, exchange programs, logistics and provision of equipment).

Alternative energy (e.g. hydrogen) technology.

c) Within the framework of environmental cooperation.

1) Cooperation projects outside the Thule Defense Area, under the purview of the Joint Committee.

Cooperation on site surveys to help elaborate "clean-up" plan(s) outside the Thule Defense Area. The partners' contributions to such implementation, including clean up, will be financial or in kind, e.g. logistical support, expertise, data processing, and/or equipment.

Survey of species in North Star Bay as a part of a broader Environmental Impact assessment in accordance with AEPS standards.

Capacity building for environmental protection/improvement, including clean-up in Greenland.

Cooperation on national park management.

Oil/gas and minerals assessments.

Climate change assessments.

2) U.S. projects at the Thule Defense Area, under the purview of the Environmental Subcommittee

Measures to prevent leakage of toxic material to the recipient, including stabilization of the coastline at North Star bay (sea walls) and establishment of a drainage system to protect erosion of land (landfills).

Continued clean up and removal of materials and infrastructure within the Thule Defense Area.

Development of a framework for regular public presentation of environmental data for the Thule Defense Area.

Surveys on air emission and waste water (sewage).

ANNEX II

Intellectual Property Rights

I. General Obligation

The Parties shall ensure adequate and effective protection of intellectual property created or furnished under this Memorandum and relevant implementing arrangements. Rights to such intellectual property shall be allocated as provided in this Annex.

II. Scope

A. This Annex is applicable to all cooperative activities undertaken pursuant to this Memorandum, except as otherwise specifically agreed by the Parties or their designees.

B. For purposes of this Memorandum, "intellectual property" shall mean the subject matter listed in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm, July 14, 1967 and may include other subject matter as agreed by the Parties.

C. Each Party shall ensure, through contracts or other legal means with its own participants, if necessary, that the other Party can obtain the rights to intellectual property allocated in accordance with this Annex. This Annex does not otherwise alter or prejudice the allocation between a Party and its nationals, which shall be determined by that Party's laws and practices.

D. Except as otherwise provided in this Memorandum, disputes concerning intellectual property arising under this Memorandum shall be resolved through discussions between the concerned participating institutions, or, if necessary, the Parties or their designees. Upon mutual agreement of the Parties, a dispute shall be submitted to an arbitral tribunal for binding arbitration in accordance with the applicable rules of international law. Unless the Parties or their designees agree otherwise in writing, the arbitration rules of UNCITRAL shall govern.

E. Termination or expiration of this Memorandum shall not affect rights or obligations under this Annex.

III. Allocation of Rights

A. Each Party shall be entitled to a non-exclusive, irrevocable, royalty-free license in all countries to translate, reproduce, and publicly distribute scientific and technical journal articles, reports, and books directly arising from cooperation under this Memorandum. All publicly

distributed copies of a copyrighted work prepared under this provision shall indicate the names of the authors of the work unless an author explicitly declines to be named.

B. Rights to all forms of intellectual property, other than those rights described in paragraph III.A above, shall be allocated as follows:

(1) Visiting researchers shall receive rights, awards, bonuses and royalties in accordance with the policies of the host institution.

(2) (a) The ownership of any intellectual property created by persons employed or sponsored by one Party under cooperative activities other than those covered by paragraph III.B(1) shall be allocated by mutual agreement considering the relative contributions of the Parties and their participants to the cooperative activities, the degree of commitment in obtaining legal protection and licensing of the intellectual property and such other factors deemed appropriate, including the territory in which the cooperative activities have taken place and the resources in that territory that have lead to the creation of intellectual properties. However, intellectual property created by persons employed or sponsored by both Parties shall be jointly owned by the Parties. In addition, each creator shall be entitled to awards, bonuses and royalties in accordance with the policies of the institution employing or sponsoring that person.

(b) Unless otherwise agreed in an implementing or other arrangement, each Party shall have within its territory a right to exploit or license intellectual property created in the course of the cooperative activities.

(c) The rights of a Party outside its territory shall be determined by mutual agreement considering the relative contributions of the Parties and their participants to the cooperative activities, the degree of commitment in obtaining legal protection and licensing of the intellectual property and such other factors deemed appropriate.

(d) Notwithstanding paragraphs III.B(2)(a) and (b) above, if either Party believes that a particular project is likely to lead to or has led to the creation of intellectual property not protected by the laws of the other Party, the Parties shall immediately hold discussions to determine the allocation of rights to the intellectual property. If an agreement cannot be reached within three months of the date of the initiation of the discussions, cooperation on the project in question shall be terminated at the request of either Party. Creators of intellectual property shall nonetheless be entitled to awards, bonuses and royalties as provided in paragraph III.B(2)(a).

(e) For each invention made under any cooperative activity, the Party employing or sponsoring the inventor(s) shall disclose the invention promptly to the other Party together with any documentation and information necessary to enable the other Party to establish any rights to which it may be entitled. Either Party may ask the other Party in writing to delay publication or public disclosure of such documentation or information for the purpose of protecting its rights in the invention. Unless otherwise agreed in writing, the delay shall not exceed a period of six months from the date of disclosure by the inventing Party to the other Party.

IV. Business Confidential Information

In the event that information identified in a timely fashion as business-confidential is furnished or created under this Memorandum, each Party and its participants shall protect such information in accordance with applicable laws, regulations, and administrative practices. Information may be identified as "business-confidential" if a person having the information may derive an economic benefit from it or may obtain a competitive advantage over those who do not have it, and the information is not generally known or publicly available from other sources, and the owner has not previously made the information available without imposing in a timely manner an obligation to keep it confidential.

ANNEX III

SECURITY OBLIGATIONS

I. PROTECTION OF SENSITIVE TECHNOLOGY

Both Parties agree that no information or equipment requiring protection in the interest of national defense or foreign relations and classified in accordance with its applicable national laws and regulations shall be provided under this Memorandum. In the event that information or equipment, which is known or believed to require such protection, is identified in the course of cooperative activities pursuant to this Memorandum, it shall be brought immediately to the attention of the appropriate officials and the Parties shall consult to identify appropriate security measures to be agreed upon by the Parties in writing and applied to this information and equipment and shall, if appropriate, amend this Memorandum to incorporate such measures.

II. TECHNOLOGY TRANSFER

The transfer of unclassified export-controlled information or equipment between the Parties shall be in accordance with the relevant laws and regulations of each Party. If either Party deems it necessary, detailed provisions for the prevention of unauthorized transfer or retransfer of such information or equipment shall be incorporated into the contracts or project annexes. Export controlled information shall be marked to identify it as export controlled and identify any restrictions on further use or transfer.